UNIVERSAL
ENGINEERING
INCORPORATED

# WASTE MANAGEMENT PLAN

FOR THE

REMEDIAL INVESTIGATION/FEASIBILITY STUDY

FIELD ACTIVITIES

AT THE

NAVAL STATION, TREASURE ISLAND, HUNTERS POINT ANNEX

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Implemented by:

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## 1.0 Introduction

This document presents the Waste Management Plan for the Remedial Investigation/Feasibility Study (RI/FS) field activities at the Naval Station, Treasure Island, Hunters Point Annex (HPA), San Francisco, California. The location of HPA is shown on Plate 1. The purpose of the Waste Management Plan is to describe the procedures to be followed for coordination, management, and disposal of RI/FS-generated wastes. These wastes will generally include soil cuttings, mud rotary slurry, personal protective equipment, decontamination washwater, and purged water from wells.

Waste management at HPA will involve coordination between the RI/FS firm, the waste management firm, and the Navy. Unless otherwise specified in this plan, the actions described herein are to be conducted by the waste management firm.

The Navy is responsible for overall monitoring of the activities, although immediate monitoring will be provided by the RI/FS firm. Navy personnel include the HPA Environmental Coordinator, located at HPA, and the engineers, located at Naval Facilities Engineering Command, Western Division (WESTDIV). The waste management firm is responsible for providing documentation to the Navy as described herein, as well as keeping the Navy and the RI/FS firm informed of the their activities.

The RI/FS firm will conduct the field activities which generate the wastes and will keep the waste management firm informed of these

activities. As the wastes are generated, the RI/FS firm will place the wastes in appropriate containers or will stockpile the waste for transport to a central accumulation area by the waste management firm. The wastes will be inventoried and labeled at the site of generation by the RI/FS firm.

The waste management firm will be responsible for handling and managing the RI/FS-generated wastes from the time they have been inventoried and labeled by the RI/FS firm through disposal. These tasks will include, but may not be limited to:

- transport of containers (e.g. drums, 20-yard roll-off bins) and/or soil to a centralized accumulation area
- inventorying and tracking containers (including source of wastes, dates of generation, volumes) at the central accumulation area or decontamination facility
- tracking 90-day storage limits
- conducting weekly inspections of wastes stored in the centralized accumulation area; providing written reports of such inspections to the Navy and to the RI/FS firm
- sampling and analyzing waste when RI/FS generated data will not be used to determine appropriate disposal methods
- evaluating chemical data to determine disposal options (on-site and off-site) and advising the Navy and RI/FS firm of such options
- preparing manifests, etc. for offsite disposal
- ultimate disposal, either to an onsite location specified by

the Navy or to an acceptable permitted offsite disposal or transfer facility

The waste management firm will keep the RI/FS firm and the Navy informed of the status of the above items.

The waste management firm's activities will be performed in accordance with the following documents developed for HPA:

1) Harding Lawson Associates (HLA), May 27, 1988, Work Plan Volume 3, Quality Assurance Project Plan (QAPP), Remedial Investigation/Feasibility Study, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California. Revised pages incorporated by reference.

2) HLA, April 15, 1988, Work Plan Volume 5, Site Safety Plan, Remedial Investigation/Feasibility Study, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California.

3) Scope of Work, October 6, 1988, Delivery Order 36, Contract N62474-86-D-0996.

4) HLA, December 16, 1988, Standard Operating Procedures (SOP) and Spill Prevention Countermeasure and Contingency (SPCC) Plan, Naval Station, Treasure Island, Hunters Point Annex, San Francisco, California.

## 2.0 Regulations

The classification, management, and transport of hazardous wastes will comply with the following Federal Agency mandates:

40 CFR, 260-265 Hazardous Waste Management

40 CFR, 122-124/171-177 Permit Regulations

29 CFR, 1910.120 & 1910.1200 Hazardous Waste Worker Training

49 CFR, 100-177 Transportation of Hazardous Materials

40 CFR, 268 Land Disposal Restrictions

The classification, management, and transport of hazardous wastes will also comply with the more stringent California implementing agency mandates including:

C.C.R. Title 22, Division 20, Section 6: California State Department of Health Services Hazardous Waste Control Law

C.C.R. Title 22, Division 4, Chapter 30: Minimum Standards For Management of Hazardous & Extremely Hazardous Wastes.

C.C.R. Title 23, Subchapter 15: Discharges of Waste to Land

## 3.0 Generation of RI/FS-Derived Wastes

All RI/FS-derived wastes will be contained, packaged, labeled, and managed in an appropriate manner pending results of chemical analysis.

Waste materials may be generated during the various RI/FS field activities as described in the following sections.

## 3.1 Soil cuttings from test borings and/or test pits:

These soils will generally be placed into 55-gallon drums at each drilling location. In some instances, the soil may be placed onto plastic sheeting at each drilling location; such soil piles will not remain at each location longer than two days. Each drum or soil pile will be labeled; the label will indicate the boring/pit number and depths, if applicable. Soil piles will be moved from the drilling location into bins or drums at the Hazardous Waste Accumulation Storage Area (HWASA), Building 810 (Section 4.0). Drums will also be transferred to the HWASA.

## 3.2 Mud slurry from rotary drilling activities:

Because of its semiliquid nature, mud slurry will either be placed into 55-gallon drums at each drilling location, or will be pumped into a portable storage tank from which the slurry will then be pumped into a tank or bin at the HWASA or the decontamination area. Labels and/or records will indicate the source of the material (e.g. boring number).

3.3 Sludge from decontamination area sump:

Sludge which has accumulated in the sump at the decontamination area will be cleaned out periodically and placed into labeled 55-gallon drums. Full drums will be moved to the HWASA.

3.4 Personal Protective Equipment (PPE):

PPE may consist of, but not be limited to, used gloves, Tyvek suits, and respirator cartridges. Such disposable equipment will be placed into labeled 55-gallon drums. Full drums will be moved to the HWASA.

3.5 Decontamination washwater:

The sump at the decontamination area has been designed to collect liquids generated from decontamination activities. These liquids may result from Alconox washes, deionized water rinses, and/or high-pressure hot-water washes. During active field operations, the liquid will be pumped daily from the sump into a nearby 6500-gallon Baker polytank. Records will be kept for individual Baker tanks and will indicate accumulation dates.

3.6 Purged water from wells:

During development and prior to sampling, wells will be purged of standing water. This water will be pumped or bailed from the well and

will be placed into a portable storage tank (truck- or trailer-mounted). When this tank is full, or at the end of a sampling event, the tank contents will be transferred to a Baker tank at the decontamination area. Records will be kept which will indicate accumulation dates and purged wells.

## 4.0 On-Site Transportation & Storage

Solid or semi-solid wastes generated at various drilling and sampling locations generally will be transferred to a central accumulation site as soon as operationally feasible. Containers or soil piles will not be left longer than two days before being transferred to the HWASA. Transfers of drums containing wastes will be accomplished using a flatbed truck licensed to haul hazardous wastes. Transfers of bins will be accomplished by bin trucks licensed to haul hazardous waste. No waste containers will be left at any site in an unlabeled, unmanaged condition.

### 4.1 Hazardous Waste Accumulation Storage Area and Decontamination Facility

As mentioned above, RI/FS-derived wastes will generally be transported to a central accumulation area. This area is the Hazardous Waste Accumulation Storage Area (HWASA) and is located in or immediately outside of Building 810. Wastes will be stored in the HWASA in containers (e.g. drums, bins). Other RI-derived wastes, mainly

liquids, will be temporarily stored in Baker tanks at the decontamination facility. The locations of these facilities are shown on Plate 2. Both the HWASA and the decontamination facility will be secured when not in use.

Personnel from the waste management firm will coordinate and cooperate fully with the Navy. The waste management firm will provide all materials, equipment, and vehicles necessary to manage RI/FS-derived wastes in the storage areas.

In general, a weekly inspection of the HWASA and the decontamination facility will be performed by members of the waste management firm. If the sump at the decontamination facility contains a significant amount of liquid and/or solids, the liquid will be pumped into the Baker tanks or drums, and the solids will be placed in drums. The waste management firm will provide an inspection checklist and logged documentation to the NAVY of the conditions of the waste containers, HWASA, and decontamination facility. Corrective actions identified during such inspections will be undertaken immediately or as soon as feasible.

## 5.0 Waste Characterization

As needed, the material in the containers (e.g. drums, bins, Baker tanks) will be evaluated with respect to disposal criteria. Where possible, the information obtained for the RI will be used. In some cases, samples will need to be collected solely for the purpose of

evaluating disposal options. Soil samples may consist of discrete or composite samples and will be collected following protocol described in HPA QAPP. The waste management firm in conjunction with the RI/FS firm will select the compositing rationale. In most cases, these soil samples will be collected by the waste management firm.

PPE will be considered hazardous and disposed of as solid hazardous waste. Liquid samples will generally be collected by bailing a sample from the Baker tanks and decanting the liquid into sample containers. All samples will be labeled with a unique sample number; and records will be kept indicating the corresponding bin, drum, or tank number, as well as the date of collection.

In general, the analytical parameters selected to evaluate disposal options will depend upon the source of the RI/FS-derived wastes. The analytical program will therefore be based on the expected contaminants or preliminary data. Composite samples of the waste will be utilized to the extent possible. In some cases after review of the initial data, samples may need to be analyzed using the California Waste Extraction Test, Toxicity Characteristic Leaching Procedure, and/or bioassays. Accumulated water will be analyzed to accomodate local (San Francisco Industrial Waste Division of Public Works) sanitary system discharge parameters (Attachment 1).

Soil containing total metals concentrations in excess of the total threshold limit concentration (TTLC) will be considered hazardous in accordance with the California Code of Regulations (CCR), Title 22,

Chapter 30, Division 1, Article 11, Section 66699. In accordance with CCR, Title 22, Section 66700, a waste extraction test (WET) is required to evaluate the leachability of metals from the soil when total metals concentrations exceed the soluble threshold limit concentration (STLC). However, since the WET involves a 10:1 dilution of the sample, only samples containing total metal concentrations in excess of 10 times the STLC could yield a soluble metals concentration greater than 10 times the STLC. WET's will therefore be performed only on samples containing total metals concentrations greater than 10 times the STLC. Soil containing total metals concentrations that are less than this limit will be considered nonhazardous based on metals concentrations, and a WET will not be performed.

## 6.0 Reporting

Following evaluation of the chemical data and before the expiration of the 90-day storage limit, the analytical results and preferred disposal options will be summarized in a letter to the Navy and the RI/FS firm. This letter will document the methods and results of the necessary chemical analyses. Navy approval will be obtained prior to proceeding with the selected disposal options, either onsite or offsite.

## 7.0 Disposal

Depending upon the results of the waste characterization, RI-derived wastes may be disposed of as hazardous or nonhazardous. In either case, concurrence from the Navy will be obtained prior to disposal either on-site or off-site.

Solids characterized as hazardous generally will be disposed at a permitted treatment, storage, and disposal (TSD) facility. In general, the wastes will be transported by a licensed waste hauler to a California, Class I TSD facility. The California Class I TSD facilities will be audited for all Federal and State licenses, permits, materials, and personnel. Where necessary, transport and disposal to an out-of-state permitted TSD facility will be arranged. The waste management firm will prepare the manifests and other supporting documentation required by the regulations as well as the individual TSD facility. Copies of transportation documents, manifests, and other documents relating to waste disposal will be provided to the Navy and the RI/FS firm.

Because of the ultramafic composition of the rocks of the Franciscan Complex, bedrock at HPA contains naturally occurring levels of chromium and nickel that can be in excess of the TTLC or ten times the STLC. Since most of the fill meterials were obtained from the bedrock, and borings are drilled through the fill, many of the drill cuttings will contain nickel in excess of these criteria. The Navy may elect to

dispose of these materials on-site if they are not characterized as hazardous based on other criteria. The Navy may also elect to perform on-site treatment of wastes classified as hazardous. In either of these events, the Navy will work with the DHS to satisfy any variance requirements which would apply. The decision to pursue such discussions will be made by the Navy.

Solids classified as nonhazardous will be returned to their point of origin (if operationally feasible) or to a designated location selected by the Navy Environmental Coordinator. Drums will be reused where possible; however, drums in poor condition will be disposed of at an acceptable off-site facility. Nonhazardous materials which cannot be disposed of on-site for any unforeseen reasons will be transported to a licensed landfill for disposal. If disposal of such nonhazardous solids cannot be accomplished immediately, drum or bin labels will be ammended to indicate that chemical results have shown the nonhazardous status.

Containerized liquid wastes classified as hazardous will be transported to facilities licensed and capable of liquid waste disposal. The specific facility will depend on the concentrations of various analytes, and each situation will have to be reviewed on a case-by-case basis. Should analytical results show that the aqueous wastes are nonhazardous and meet sanitary sewer discharge parameters, the San Francisco Industrial Waste Division, Department of Public Works will be notified, and a permit will be obtained for a point source discharge. The waste management firm, along with the Navy engineer-in-charge or

on-scene coordinator, will arrange the disposal of liquid wastes on-site or off-site.

## 8.0 Record Keeping

All RI/FS-derived wastes will be identified, labeled, and inventoried to ensure physical tracking and management. Records will identify source (geographic), characteristic, and date of generation. Dates of collection of individual or composite samples will also be noted. Waste profiles will be determined by analytical results and stored wastes will be identified accordingly. Following on-site or off-site disposal, records will be updated to indicate the ultimate disposal site (e.g. on-site location, specific TSD facility).

Manifests prepared by the waste management firm will be supplied to designated Navy personnel for signature. Hard-bound logbooks containing identification codes, location and inventory of waste containers, initial dates of generation, hazardous contents of wastes, and manifest numbers to off-site TSD facilities will be kept under the supervision of the waste management firm's senior technician on site. Copies of the logbook will be supplied to the RI/FS firm and the Navy on a biweekly basis or as needed. In addition, the waste management firm will provide the Navy with information concerning off-site transportation of hazardous wastes at least two weeks prior to transportation so that community information releases may be prepared by the Navy.

## 9.0 Operational Coordination

Management of wastes will require ongoing coordination of activities with the Navy, the RI/FS firm, and the waste management firm. Timing of hazardous waste transport will involve receipt and evaluation of laboratory analyses; requests to the Class I TSD facility for acceptance; notification to the Navy of the volume and type of waste to be transported; and finally, the ultimate loading, transport, and unloading of the waste material. If problems arise during the disposal process, the Navy and the RI/FS firm will be notified of the situation and corrective actions as soon as possible. Alternate arrangements will be scheduled by the waste management firm in advance. Figures 1 and 2 outline the decision processes for determination of proper disposal of aqueous and solid wastes generated from the RI/FS.

## 10.0 Summary

This document has described the general waste management procedures that will be followed during the course of the RI/FS. The waste management firm will be responsible for implementation of this plan and will keep the RI/FS firm informed of the progress and problems encountered. To the extent possible, the waste management firm will also keep the HPA Environmental Coordinator informed of the status of waste disposal activities. During active field operations, status reports will be provided at least biweekly, along with copies of the log book (Section 8.0); at other times, such status reports will be produced upon request by the RI/FS firm or the Navy. It will be the responsibility of the Environmental Coordinator to sign or designate signature authority for waste manifests.

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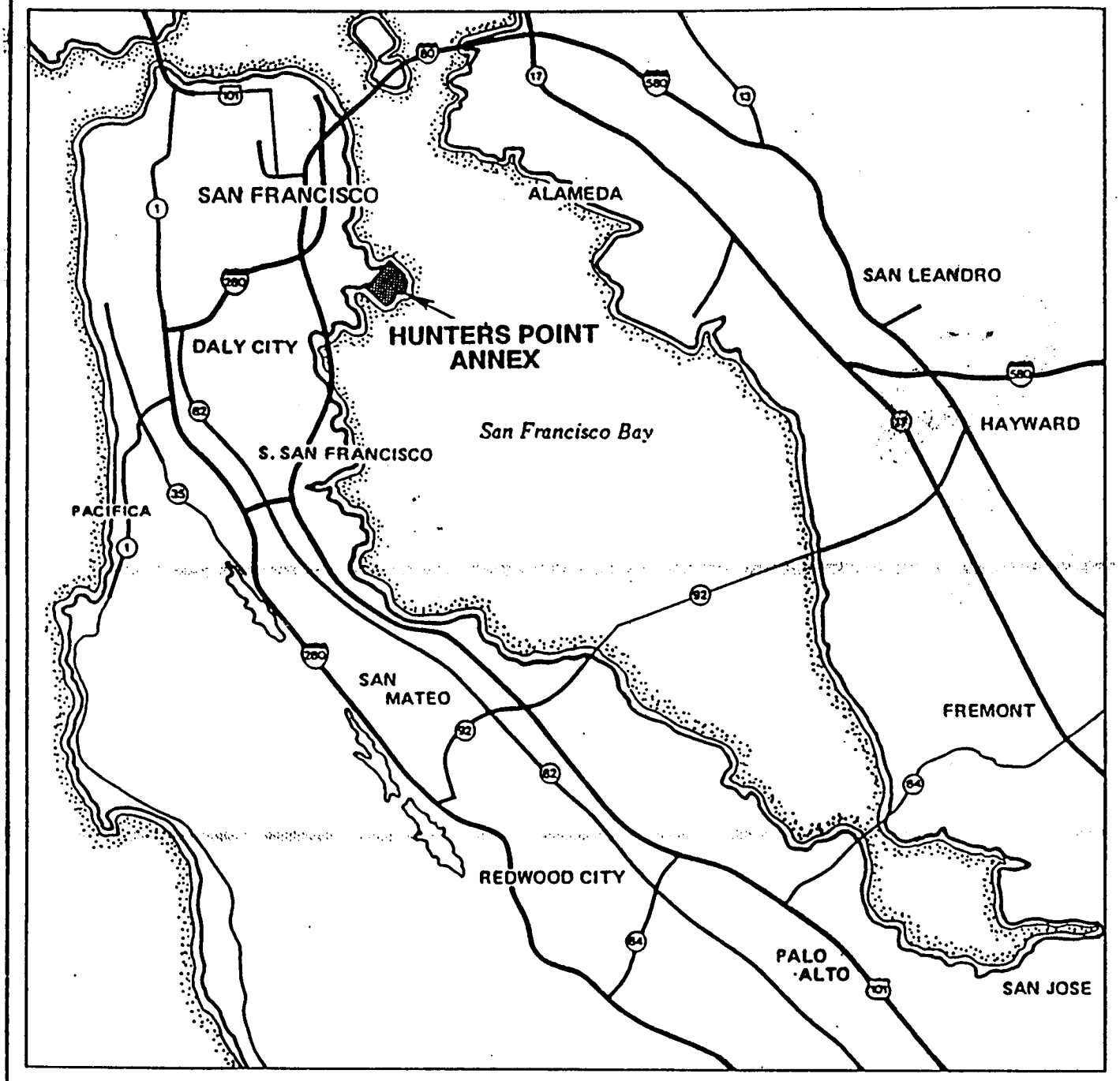


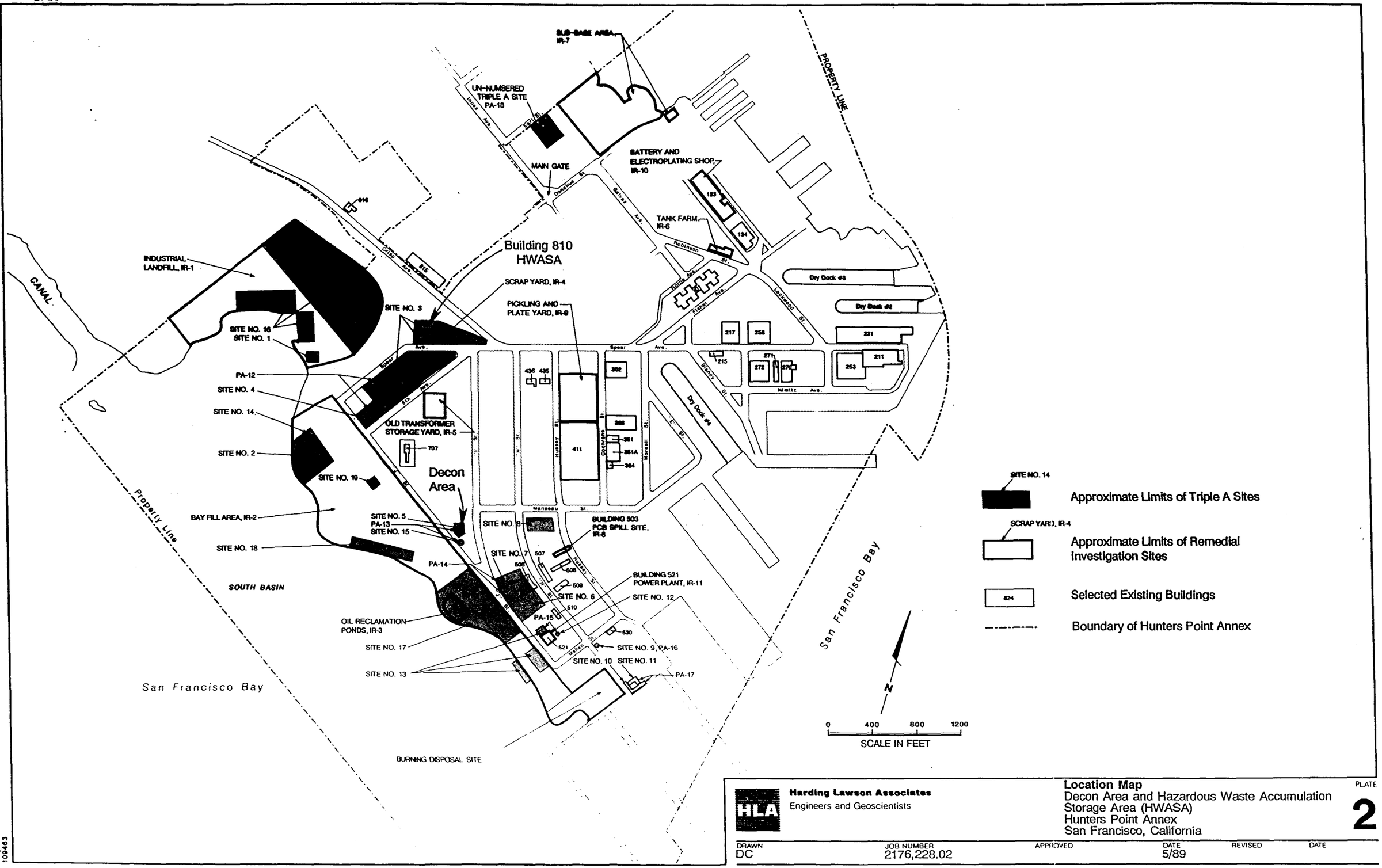

**Harding Lawson Associates**
Engineers, Geologists & Geophysicists

**Location Map**
Waste Management Plan
Hunters Point Annex
San Francisco, California

PLATE **1**

| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| DM | 2176,228.02 | | 6/89 | | |

2736.12095




**Harding Lawson Associates**
Engineers and Geoscientists

**Location Map**
Decon Area and Hazardous Waste Accumulation Storage Area (HWASA)
Hunters Point Annex
San Francisco, California

PLATE **2**

| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| DC | 2176,228.02 | | 5/89 | | |

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PLATE 3: WASTE MANAGEMENT OF AQUEOUS SUBSTANCES AT HPA

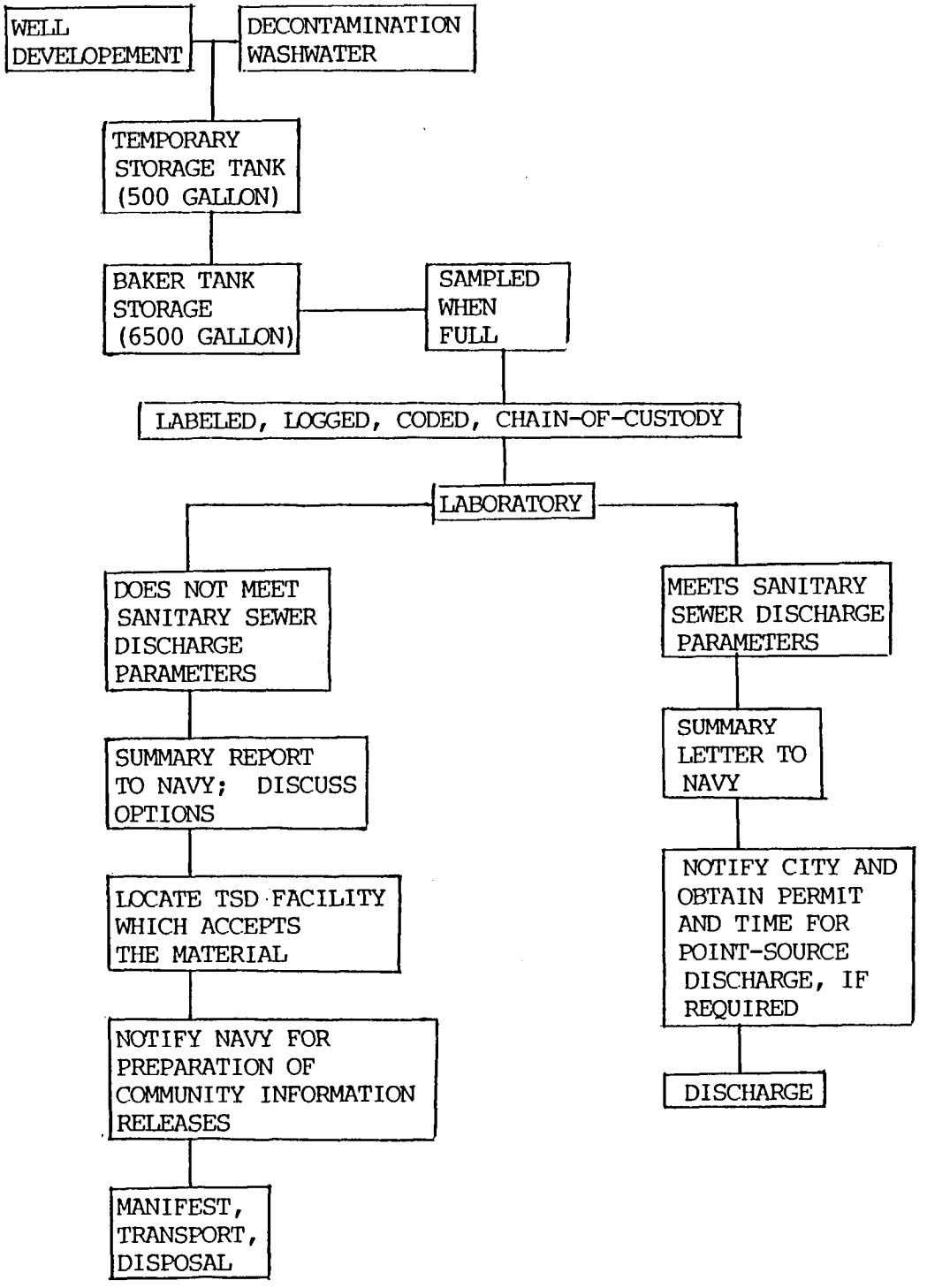
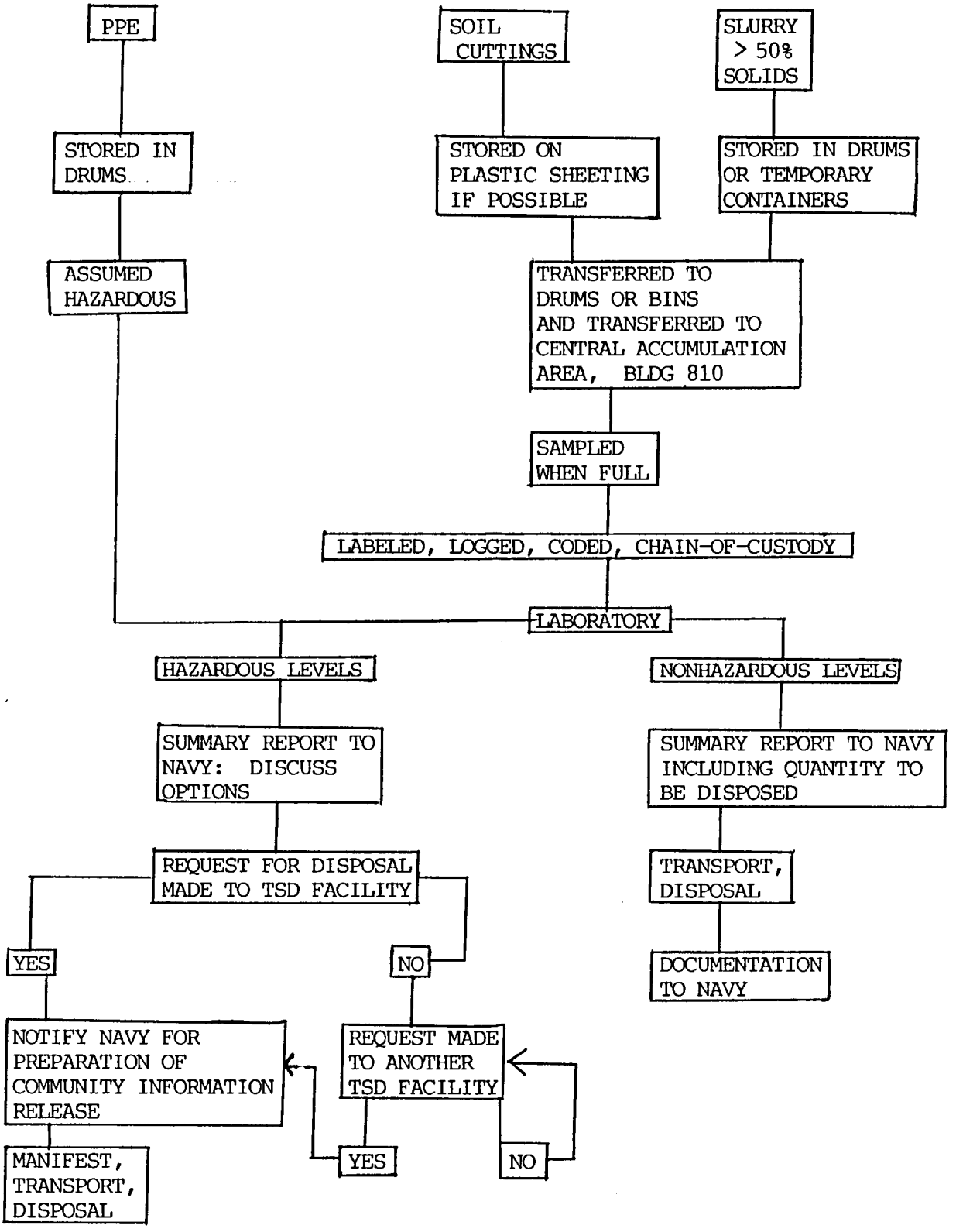


**PLATE 4: WASTE MANAGEMENT OF SOLIDS AT HPA**



Attachment 1

City and County of San Francisco
Department of Public Works
Industrial Waste Ordinance No. 199-77

Sec. 121 Limitations and Prohibitions. For the purpose of this Article the following limitations shall apply:

(a) Each individual discharge of industrial waste by a discharger shall not exceed the numerical limits of the following based upon any grab sample:

| | | Limits |
|---|---|---|
| (1) | pH | 6.0 min; 9.5 max |
| (2) | Dissolved Sulfides | 0.5 mg/l max |
| (3) | Temperature (except where higher temperatures are required by law) | 125 F max |
| (4) | Grease/Oil of mineral or petroleum origin. | 100 mg/l |

(b) The total discharge of industrial waste by a discharger shall not exceed the numerical limits of the following based upon analyses of such composite samples collected at such locations and over such period of time as determined by the Director:

| | | |
|---|---|---|
| (1) | Grease/Oil of Animal or Vegetable Origin | 300 mg/l |
| (2) | Chemical Oxygen Demand | 2,500 mg/l |

(c) The Director may permit an industrial waste containing radioactive materials provided that all the following conditions are satisfied:

1. The discharger is authorized to use radioactive materials by the Nuclear Regulatory Commission or other governmental agency empowered to regulate the use of radioactive materials; and

2. The radioactive waste is discharged in strict conformity with Nuclear Regulatory Commission or other governmental agency requirements.

(d) No person shall discharge, deposit, or throw, or cause, allow or permit to be discharged, diposited or thrown into the City's sewerage system any substance of any kind whatever tending to obstruct of injure the sewerage system, or cause a nuisance; or which will in any manner interfere with the proper operation, repair or maintenance of the sewerage system, or will in any way render it difficult for any workmen to repair any part of the sewerage system. Such substances include but are not limited to the following:

1. Ashes, cinders, sand, gravel, dirt, bark, leaves, grass cuttings and straw, metals, glass, ceramics and plastics, or any other solid or viscous substance capable of causing obstruction to the flow in sewers.

2. Flammable or explosive substances or any other substances

which may interact with other wastes to cause flammable or explosive conditions in the sewerage system.

3. Garbage, excepting Properly Ground Garbage from dwellings and restaurants or other extablishments engaged in the preparation of foods and beverages intended primarily for immediate consumption.

4. Any toxic or noxious or malodorous substance which either singly or by interaction with other wastes is capable of creating a nuisance or hazard to life and limb or of preventing maintenance of the sewerage system.

(e) No person shall discharge, without written permission of the Director, any substances other than runoff water directly into a manhole, catch basin, or other opening in the sewerage system other than through an approved side sewer.